RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:

Source:

Date Processed by STIC:

ENTERED



PCT

RAW SEQUENCE LISTING DATE: 02/27/2006
PATENT APPLICATION: US/10/526,221 TIME: 14:37:32

Input Set : A:\265833US0XPCT.ST25.txt
Output Set: N:\CRF4\02272006\J526221.raw

```
3 <110> APPLICANT: Ferreira, Paulo
             Hemerly, Adriana
      6 <120> TITLE OF INVENTION: PLANTS HAVING A CHANGED DEVELOPMENT AND A METHOD FOR MAKING
THE
              SAME
     9 <130> FILE REFERENCE: 265833US0XPCT
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/526,221
     12 <141> CURRENT FILING DATE: 2005-03-01
                                                                      (p5.6)
    14 <150> PRIOR APPLICATION NUMBER: PCT/EP03/10087
    15 <151> PRIOR FILING DATE: 2003-09-05
    17 <150> PRIOR APPLICATION NUMBER: PCT/EP02/10265
    18 <151> PRIOR FILING DATE: 2002-09-05
    20 <160> NUMBER OF SEQ ID NOS: 14
    22 <170> SOFTWARE: PatentIn version 3.3
     24 <210> SEQ ID NO: 1
     25 <211> LENGTH: 2434
    26 <212> TYPE: DNA
    27 <213> ORGANISM: Arabidopsis thaliana
    29 <400> SEQUENCE: 1
    30 atgatggaga atctactggc gaattgtgtc cagaaaaacc ttaaccattt tatgttcacc
                                                                              60
    32 aatgctatet teetttgega aettettete geecaattte eatetgaggt gaacetgeaa
                                                                             120
    34 ttgttagcca ggtgttactt gagtaacagt caagettata gtgcatatta tateettaaa
                                                                             180
    36 ggttcaaaaa cgcctcagtc tcggtattta tttgcattct catgctttaa gttggatctt
                                                                             240
    38 cttggagagg ctgaagctgc attgttgccc tgtgaagatt atgctgaaga agttcctggt
                                                                             300
    40 gqtqcaqctq ggcattatct tcttqqtctt atatatagat attctgggag gaagaactgt
                                                                             360
                                                                             420
    42 tcaatacaac agtttaggat ggcattgtca tttgatccat tgtgttggga agcatatgga
    44 gaactttgta gtttaggtgc cgctgaagaa gcctcaacag ttttcgggaa tgttgcttcc
                                                                             480
    46 cagcgtctta aaacttgtgt agaacaaaga ataagcttct cagaaggagc aaccatagac
                                                                             540
    48 cagattacag attctgataa ggccttaaaa gatacaggtt tatcgcaaac agaacacatt
                                                                             600
    50 ccaggagaga accaacaaga tctgaaaatt atgcagcagc ctggagatat tccaccaaat
                                                                             660
                                                                             720
    52 actgacaggc aacttagtac aaacggatgg gacttgaaca caccttctcc agtgctttta
    54 caggtaatgg atgetecace geetetgett ettaagaata tgegtegtee ageagtggaa
                                                                             780
                                                                             840
    56 ggatctttga tgtctgtaca tggagtgcgt gtgcgtcgaa gaaacttttt tagtgaagaa
    58 ttgtcagcag aggetcaaga agaatetggg egeegeegta gtgctagaat agcagcaagg
                                                                             900
    60 aaaaagaatc ctatgtcgca gtcatttgga aaagattccc attggttaca tctttcacct
                                                                             960
    62 tecgagteaa actatgeace ttetettee tegatgattg gaaaatgeag aateeaaage
                                                                            1020
                                                                            1080
    64 agcaaagaag cgattcctga taccgttact ctaaatgatc cagcaacgac gtcaggccag
                                                                            1140
    66 totgtaagtg acactggaag ototgttgat gatgaggaaa agtcaaatco tagtgaatct
                                                                            1200
    68 tecceggate gttteageet tatttetgga attteagaag tgetaggeat tetgaaaatt
                                                                            1260
    70 cttqqaqatq qccacaqqca tttacatatq tacaaqtqtc aqqaaqcttt qttggcatat
                                                                            1320
    72 caaaagctat ctcagaaaca atacaataca cactgggttc tcatgcaggt tggaaaagca
    74 tattttgagc tacaagacta cttcaacgct gactcttcct ttactcttgc tcatcaaaag
                                                                            1380
                                                                            1440
    76 tatccttatg ctttggaagg aatggataca tactccactg ttctttatca cctgaaagaa
```

78 gagatgaggt tgggctatct ggctcaggaa ctgatttcag ttgatcgcct gtctccagaa

1500

Input Set : A:\265833US0XPCT.ST25.txt
Output Set: N:\CRF4\02272006\J526221.raw

```
80 tectoqtqtq caqttqqqaa etqttacaqt ttqcqtaagg atcatgatac tgetetcaaa
                                                                      1560
82 atqtttcaqa qaqctatcca actqaatqaa aqattcacat atqcacatac cctttqtggc
                                                                      1620
84 cacgaqtttg ccgcattgga agaattcgag gatgcagaga gatgctaccg gaaggctctg
                                                                      1680
86 qqcataqata cqagacacta taatqcatqq tacqqtcttq gaatqaccta tcttcqtcaq
                                                                      1740
88 gagaaattcg agtttgcgca gcatcaattt caactggctc tccaaataaa tccaagatct
                                                                      1800
90 tcagtcatca tgtgttacta tggaattgct ttgcatgagt caaagagaaa cgatgaggcg
                                                                      1860
92 ttgatgatga tggagaaggc tgtactcact gatgcaaaga atccgctccc caagtactac
                                                                      1920
94 aaggeteaca tattaaccag cetaggtgat tatcacaaag cacagaaagt tttagaagag
                                                                      1980
96 ctcaaagaat gtgctcctca agaaagcagt gtccatgcat cgcttggcaa aatatacaat
                                                                      2040
98 cagctaaagc aatacgacaa agccgtgtta catttcggca ttgctttgga tttaagccct
                                                                      2100
100 tetecatetg atgetgteaa gataaagget tacatggaga ggttgataet accagaegag
                                                                       2160
102 ctggtgacgg aggaaaattt gtagatttat tgtgcaggta atacaccaga ttatgtttct
                                                                       2220
104 catataaccc aaagtcatct gtaatttttc tcatctttag atcagtcttg tggactaacc
                                                                       2280
106 ctaaaacaaa actqattata taaacttaga gggtaatatt acagaaaatt gtatagagtt
                                                                       2340
                                                                       2400
2434
110 aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaa
113 <210> SEO ID NO: 2
114 <211> LENGTH: 728
115 <212> TYPE: PRT
116 <213> ORGANISM: Arabidopsis thaliana
118 <400> SEQUENCE: 2
120 Met Met Glu Asn Leu Leu Ala Asn Cys Val Gln Lys Asn Leu Asn His
124 Phe Met Phe Thr Asn Ala Ile Phe Leu Cys Glu Leu Leu Leu Ala Gln
128 Phe Pro Ser Glu Val Asn Leu Gln Leu Leu Ala Arg Cys Tyr Leu Ser
           35
                               40
132 Asn Ser Gln Ala Tyr Ser Ala Tyr Tyr Ile Leu Lys Gly Ser Lys Thr
                           55
                                               60
136 Pro Gln Ser Arg Tyr Leu Phe Ala Phe Ser Cys Phe Lys Leu Asp Leu
                       70
                                           75
140 Leu Gly Glu Ala Glu Ala Ala Leu Leu Pro Cys Glu Asp Tyr Ala Glu
144 Glu Val Pro Gly Gly Ala Ala Gly His Tyr Leu Leu Gly Leu Ile Tyr
145
                                   105
               100
148 Arg Tyr Ser Gly Arg Lys Asn Cys Ser Ile Gln Gln Phe Arg Met Ala
                               120
152 Leu Ser Phe Asp Pro Leu Cys Trp Glu Ala Tyr Gly Glu Leu Cys Ser
       130
                           135
                                               140
156 Leu Gly Ala Ala Glu Glu Ala Ser Thr Val Phe Gly Asn Val Ala Ser
                       150
                                           155
160 Gln Arg Leu Gln Lys Thr Cys Val Glu Gln Arg Ile Ser Phe Ser Glu
161
                   165
                                       170
164 Gly Ala Thr Ile Asp Gln Ile Thr Asp Ser Asp Lys Ala Leu Lys Asp
                                   185
168 Thr Gly Leu Ser Gln Thr Glu His Ile Pro Gly Glu Asn Gln Gln Asp
           195
                               200
172 Leu Lys Ile Met Gln Gln Pro Gly Asp Ile Pro Pro Asn Thr Asp Arg
173
       210
                           215
                                               220
```

Input Set : A:\265833US0XPCT.ST25.txt
Output Set: N:\CRF4\02272006\J526221.raw

	Gln	Leu	Ser	Thr	Asn	Gly	Trp	Asp	Leu	Asn	Thr	Pro	Ser	Pro	Val	Leu
	225					230					235					240
180	Leu	Gln	Val	Met	Asp	Ala	Leu	Pro	Pro	Leu	Leu	Leu	Lys	Asn		Arg
181					245					250					255	
184	Arg	Pro	Ala	Val	Glu	Gly	Ser	Leu		Ser	Val	His	Gly	Val	Arg	Val
185				260					265					270		
188	Arg	Arg	Arg	Asn	Phe	Phe	Ser	Glu	Glu	Leu	Ser	Ala	Glu	Ala	Gln	Glu
189			275					280					285			
192	Glu	Ser	Gly	Arg	Arg	Arg	Ser	Ala	Arg	Ile	Ala	Ala	Arg	Lys	Lys	Asn
193		290					295					300				
196	Pro	Met	Ser	Gln	Ser	Phe	Gly	Lys	Asp	Ser	His	Trp	Leu	His	Leu	Ser
	305					310					315					320
200	Pro	Ser	Glu	Ser	Asn	Tyr	Ala	Pro	Ser	Leu	Ser	Ser	Met	Ile	Gly	Lys
201					325					330					335	
204	Cys	Arg	Ile	Gln	Ser	Ser	Lys	Glu	Val	Ile	Pro	Asp	Thr	Val	Thr	Leu
205				340					345					350		
208	Asn	Asp	Pro	Ala	Thr	Thr	Ser	Gly	Gln	Ser	Val	Ser	Asp	Ile	Gly	Ser
209			355					360					365			
212	Ser	Val	Asp	Asp	Glu	Glu	Lys	Ser	Asn	Pro	Ser	Glu	Ser	Ser	Pro	Asp
213		370					375					380				
216	Arg	Phe	Ser	Leu	Ile	Ser	Gly	Ile	Ser	Glu	Val	Leu	Ser	Leu	Leu	Lys
	385					390					395					400
220	Ile	Leu	Gly	Asp	Gly	His	Arg	His	Leu	His	Met	Tyr	Lys	Cys		Glu
221					405					410					415	
224	Ala	Leu	Leu	Ala	Tyr	Gln	Lys	Leu		Gln	Lys	Gln	Tyr	Asn	Thr	His
225				420					425					430		
228	Trp	Val	Leu	Met	Gln	Val	Gly	Lys	Ala	Tyr	Phe	Glu	Leu	Gln	Asp	Tyr
229			435					440					445			
232	Phe	Asn	Ala	Asp	Ser	Ser	Phe	Thr	Leu	Ala	His	Gln	Lys	Tyr	Pro	\mathtt{Tyr}
233		450					455					460				
236	Ala	Leu	Glu	Gly	Met	Asp	Thr	Tyr	Ser	Thr		Leu	Tyr	His	Leu	
	465					470					475					480
	Glu	Glu	Met	Arg		Gly	Tyr	Leu	Ala		Glu	Leu	Ile	Ser		Asp
241					485				_	490				Δ.	495	
	Arg	Leu	Ser		Glu	Ser	Trp	Cys		Val	Gly	Asn	Cys		Ser	Leu
245				500		_	_		505			_		510		
	Arg	Lys	_	His	Asp	Thr	Ala		Lys	Met	Phe	Gln		Ala	Ile	Gln
249			515					520					525	•		
	Leu		Glu	Arg	Phe	Thr	_	Ala	His	Thr	Leu	_	Gly	His	Glu	Phe
253		530					535					540				_
		Ala	Leu	Glu	Glu		Glu	Asp	Ala	Glu		Cys	Tyr	Arg	Lys	Ala
257						550					555					560
	Leu	Gly	Ile	Asp		Arg	His	Tyr	Asn		Trp	Tyr	Gly	Leu	_	Met
261					565					570					575	
	Thr	Tyr	Leu	-	Gln	Glu	Lys	Phe		Phe	Ala	Gln	His		Phe	Gln
265				580					585					590		
	Leu	Ala		Gln	Ile	Asn	Pro	_	Ser	Ser	Val	Ile		Cys	Tyr	Tyr
269			595					600					605			
272	Gly	Ile	Ala	Leu	His	Glu	Ser	Lys	Arg	Asn	Asp	Glu	Ala	Leu	Met	Met

Input Set : A:\265833USOXPCT.ST25.txt
Output Set: N:\CRF4\02272006\J526221.raw

```
615
273
        610
                                                 620
276 Met Glu Lys Ala Val Leu Thr Asp Ala Lys Asn Pro Leu Pro Lys Tyr
                        630
                                             635
280 Tyr Lys Ala His Ile Leu Thr Ser Leu Gly Asp Tyr His Lys Ala Gln
284 Lys Val Leu Glu Glu Leu Lys Glu Cys Ala Pro Gln Glu Ser Ser Val
285
                660
                                    665
                                                         670
288 His Ala Ser Leu Gly Lys Ile Tyr Asn Gln Leu Lys Gln Tyr Asp Lys
            675
                                680
292 Ala Val Leu His Phe Gly Ile Ala Leu Asp Leu Ser Pro Ser Pro Ser
                            695
                                                 700
296 Asp Ala Val Lys Ile Lys Ala Tyr Met Glu Arg Leu Ile Leu Pro Asp
297 705
                        710
                                             715
300 Glu Leu Val Thr Glu Glu Asn Leu
                    725
304 <210> SEQ ID NO: 3
305 <211> LENGTH: 2401
306 <212> TYPE: DNA
307 <213> ORGANISM: Arabidopsis thaliana
309 <400> SEOUENCE: 3
310 atgatggaga atctactggc gaattgtgtc cagaaaaacc ttaaccattt tatgttcacc
                                                                           60
                                                                          120
312 aatgetatet teettigega aettettete geecaattie eatetgaggi gaacetgeaa
314 ttqttaqcca qqtqttactt qaqtaacaqt caaqcttata qtqcatatta tatccttaaa
                                                                          180
316 ggttcaaaaa cgcctcagtc tcggtattta tttgcattct catgctttaa gttggatctt
                                                                          240
318 cttggagagg ctgaagctgc attgttgccc tgtgaagatt atgctgaaga agttcctggt
                                                                          300
320 ggtgcagetg ggcattatet tettggtett atatatagat attetgggag gaagaactgt
                                                                          360
322 tcaatacaac agtttaggat ggcattgtca tttgatccat tgtgttggga agcatatgga
                                                                          420
324 gaactttgta gtttaggtgc cgctgaagaa gcctcaacag ttttcgggaa tgttgcttcc
                                                                          480
326 cagcgtctta aaacttgtgt agaacaaaga ataagcttct cagaaggagc aaccatagac
                                                                          540
                                                                          600
328 cagattacag attctgataa ggccttaaaa gatacaggtt tatcgcaaac agaacacatt
330 ccaggagaga accaacaaga tctgaaaatt atgcagcagc ctggagatat tccaccaaat
                                                                          660
332 actgacaggc aacttagtac aaacggatgg gacttgaaca caccttctcc agtgctttta
334 caggtaatgg atgctccacc gcctctgctt cttaagaata tgcgtcgtcc agcagtggaa
                                                                          780
                                                                          840
336 ggatetttga tgtetgtaca tggagtgegt gtgegtegaa gaaacttttt tagtgaagaa
338 ttgtcagcag aggctcaaga agaatctggg cgccgccgta gtgctagaat agcagcaagg
                                                                          900
340 aaaaagaatc ctatgtcgca gtcatttgga aaagattccc attggttaca tctttcacct
                                                                          960
342 tecgagteaa actatgeace ttetetttee tegatgattg gaaaatgeag aateeaaage
                                                                         1020
344 agcaaagaag caacgacgtc aggccagtct gtaagtgaca ctggaagctc tgttgatgat
                                                                         1080
346 gaggaaaagt caaatectag tgaatettee eeggategtt teageettat ttetggaatt
                                                                         1140
348 tcagaagtgc taagcattct gaaaattctt ggagatggcc acaggcattt acatatgtac
                                                                         1200
350 aagtgtcagg aagctttgtt ggcatatcaa aagctatctc agaaacaata caatacacac
                                                                         1260
352 tgggttctca tgcaggttgg aaaagcatat tttgagctac aagactactt caacgctgac
                                                                         1320
354 tetteettta etettgetea teaaaagtat eettatgett tggaaggaat ggatacatae
                                                                         1380
                                                                         1440
356 tecactgtte tttateacet gaaagaagag atgaggttgg getatetgge teaggaactg
                                                                         1500
358 atttcaqttq atcqcctqtc tccaqaatcc tgqtgtqcag ttgggaactg ttacaqtttg
360 cgtaaggatc atgatactgc tctcaaaatg tttcagagag ctatccaact gaatgaaaga
                                                                         1560
362 ttcacatatg cacataccct ttgtggccac gagtttgccg cattggaaga attcgaggat
                                                                         1620
                                                                         1680
364 gcagagagat gctaccggaa ggctctgggc atagatacga gacactataa tgcatggtac
366 ggtcttggaa tgacctatct tcgtcaggag aaattcgagt ttgcgcagca tcaatttcaa
                                                                         1740
```

Input Set : A:\265833US0XPCT.ST25.txt
Output Set: N:\CRF4\02272006\J526221.raw

```
368 ctqqctctcc aaataaatcc aaqatcttca qtcatcatgt qttactatgq aattgctttg
                                                                      1800
370 catgagtcaa agagaaacga tgaggcgttg atgatgatgg agaaggctgt actcactgat
372 qcaaaqaatc cqctccccaa gtactacaag gctcacatat taaccagcct aggtgattat
                                                                      1920
374 cacaaaqcac aqaaaqtttt agaaqagctc aaagaatgtg ctcctcaaga aagcagtgtc
                                                                      1980
376 catgcatege ttggcaaaat atacaateag etaaagcaat acgacaaage egtgttacat
                                                                      2040
378 ttcggcattg ctttggattt aagcccttct ccatctgatg ctgtcaagat aaaggcttac
                                                                      2100
380 atggagaggt tgatactacc agacgagctg gtgacggagg aaaatttgta gatttattgt
                                                                      2160
382 gcaqqtaata caccagatta tgtttctcat ataacccaaa gtcatctgta atttttctca
                                                                      2220
384 tetttagate agtettgtgg actaaceeta aaacaaaact gattatataa aettagaggg
                                                                      2280
386 taatattaca gaaaattgta tagagttggg tttgaatttt catttctttt ccaagttgga
                                                                      2340
                                                                      2400
2401
390 a
393 <210> SEQ ID NO: 4
394 <211> LENGTH: 716
395 <212> TYPE: PRT
396 <213> ORGANISM: Arabidopsis thaliana
398 <400> SEQUENCE: 4
400 Met Met Glu Asn Leu Leu Ala Asn Cys Val Gln Lys Asn Leu Asn His
401 1
                   5
404 Phe Met Phe Thr Asn Ala Ile Phe Leu Cys Glu Leu Leu Leu Ala Gln
                                   25
408 Phe Pro Ser Glu Val Asn Leu Gln Leu Leu Ala Arg Cys Tyr Leu Ser
412 Asn Ser Gln Ala Tyr Ser Ala Tyr Tyr Ile Leu Lys Gly Ser Lys Thr
                           55
416 Pro Gln Ser Arg Tyr Leu Phe Ala Phe Ser Cys Phe Lys Leu Asp Leu
                       70
                                           75
417 65
420 Leu Gly Glu Ala Glu Ala Leu Leu Pro Cys Glu Asp Tyr Ala Glu
                                       90
                   85
424 Glu Val Pro Gly Gly Ala Ala Gly His Tyr Leu Leu Gly Leu Ile Tyr
               100
                                   105
428 Arg Tyr Ser Gly Arg Lys Asn Cys Ser Ile Gln Gln Phe Arg Met Ala
                               120
432 Leu Ser Phe Asp Pro Leu Cys Trp Glu Ala Tyr Gly Glu Leu Cys Ser
                           135
433
436 Leu Gly Ala Ala Glu Glu Ala Ser Thr Val Phe Gly Asn Val Ala Ser
                       150
                                           155
440 Gln Arg Leu Lys Thr Cys Val Glu Gln Arg Ile Ser Phe Ser Glu Gly
                   165
                                       170
444 Ala Thr Ile Asp Gln Ile Thr Asp Ser Asp Lys Ala Leu Lys Asp Thr
               180
                                   185
448 Gly Leu Ser Gln Thr Glu His Ile Pro Gly Glu Asn Gln Gln Asp Leu
           195
                               200
                                                   205
452 Lys Ile Met Gln Gln Pro Gly Asp Ile Pro Pro Asn Thr Asp Arg Gln
                           215
456 Leu Ser Thr Asn Gly Trp Asp Leu Asn Thr Pro Ser Pro Val Leu Leu
                       230
                                           235
460 Gln Val Met Asp Ala Pro Pro Pro Leu Leu Lys Asn Met Arg Arg
461
                   245
                                       250
```

Input Set : A:\265833US0XPCT.ST25.txt
Output Set: N:\CRF4\02272006\J526221.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; N Pos. 730,731,732,733 L

Seq#:6; Xaa Pos. 244,245

Seq#:7; N Pos. 911,1327,1792

Seq#:8; Xaa Pos. 260,399,554

Seq#:13; N Pos. 26

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/526,221

DATE: 02/27/2006 TIME: 14:37:33

Input Set : A:\265833US0XPCT.ST25.txt
Output Set: N:\CRF4\02272006\J526221.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application Number
L:616 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:720
L:730 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:240
L:878 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:900
L:892 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:1320
L:906 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:1740
L:1022 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:256
L:1054 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:384
L:1094 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:544
L:1286 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0